

ABSTRACT OF THE DISCLOSURE

An optical element has diffractive grooves. Each diffractive groove includes a first surface approximated by a predetermined optical function; a second surface extending in a direction to cross the first surface and being parallel to the optical axis; and a third surface to connect the first surface and the second surface. A width of the third surface in the direction perpendicular to the optical axis is 0.5% to 15% of the sum of a width of the first surface in the direction perpendicular to the optical axis and the width of the third surface in the direction perpendicular to the optical axis.